

US 6,524,831 B2

137

138

-continued

Gly Ile Asn Ile Pro Val Asp Gly Gly Leu Ala Ser Thr Tyr Val
245 250 255

<210> SEQ ID NO: 43
<211> LENGTH: 36
<212> TYPE: DNA
<213> ORGANISM: not required under old rule

<400> SEQUENCE: 43

atgcacrtba cbaayaaaca ratyyt

26

<210> SEQ ID NO: 44
<211> LENGTH: 20
<212> TYPE: PRT
<213> ORGANISM: not required under old rule
<220> FEATURE:
<221> NAME/KEY: UNSURE
<222> LOCATION: (12)
<221> NAME/KEY: UNSURE
<222> LOCATION: (13)..(19)

<400> SEQUENCE: 44

Met Gln Leu Thr Asn Lys Lys Ile Val Val Val Xaa Xaa Xaa Xaa
1 5 10 15

Xaa Xaa Xaa Xaa
20

<210> SEQ ID NO: 45
<211> LENGTH: 20
<212> TYPE: PRT
<213> ORGANISM: not required under old rule
<220> FEATURE:
<221> NAME/KEY: UNSURE
<222> LOCATION: (20)

<400> SEQUENCE: 45

Ser Ile Leu Gly Leu Asn Gly Ala Pro Val Gly Ala Glu Gln Leu Gly
1 5 10 15

Ser Ala Leu Xaa
20

What is claimed is:

1. An isolated eugenol hydroxylase comprising two subunits wherein one subunit comprises a cytochrome C which is encoded by SEQ ID NO: 11 and wherein the second subunit comprises a flavoprotein which is encoded by SEQ ID NO: 15.

2. An isolated DNA coding for the enzyme according to claim 1 comprising SEQ ID NO: 11.

3. A cosmid clone comprising an isolated DNA according to claim 2.

4. A vector comprising an isolated DNA according to claim 2.

45 5. A microorganism transformed with the isolated DNA according to claim 2.

6. A process of converting eugenol to coniferyl alcohol comprising subjecting eugenol to the eugenol hydroxylase according to claim 1 for a period of time sufficient to convert the eugenol to coniferyl alcohol and recovering the alcohol thus formed.

7. An isolated DNA coding for the enzyme according to claim 1 comprising SEQ ID NO: 15.

* * * * *